## CHIROPRACTIC CARE: A FLAWED RISK–BENEFIT ANALYSIS?

We have several concerns regarding Ernst's article "Chiropractic Care: Attempting a Risk–Benefit Analysis."[1]

The omission of methods is most troubling. Explicit criteria should be described to prevent bias in the selection of source material. With a search of one database covering 1995–2001, we retrieved 4 additional articles on chiropractic benefits and risks (references available from the author upon request). Unspecified methods preclude other investigators from confirming or refuting the author's findings through replication, a hallmark of the scientific process.[2]

Regarding benefit, Ernst cited his own study[3] that "revealed no compelling evidence to suggest that chiropractic yields clinical effects that are distinct from those of placebo manipulation." However, this study reviewed trials of manipulation (not "chiropractic care"), and he failed to cite another review[4] that found manipulation to be superior to placebo for chronic pain.

Regarding risk, Ernst again cited his own study[5] as support for his assertion that "underreporting [of complications] can be as high as 100%," but he failed to cite another article[6] in which the author argues that overreporting of complications allegedly attributable to spinal manipulation may occur as well.

Selective reporting of results is also apparent. After 1 year follow-up in the Cherkin study, chiropractic and physical therapy patients were less disabled and were more likely to perceive their care as being very good or excellent, compared with patients receiving a treatment booklet.[7] In the Giles trial, manipulation resulted in greater improvement in pain and disability than did acupuncture and medication.[8] Although the clinical significance of these differences is arguable, Ernst's statement that the results do "not show an advantage of chiropractic over control treatments" is also arguable.

Ernst asserts that chiropractic "patients with low back pain often receive upper spinal manipulation." Although this may be true, failure to acknowledge this critical assertion, coupled with the use of misleading phrases such as "essentially everyone receiving chiropractic treatment is at risk," leaves little doubt as to the author's bias.

The article includes several errors. Approximately 50 000 chiropractors are in active practice in the United States,[9] not 5000 in North America. The trials cited include patients with neck pain and sciatica, not just back pain. The visit frequency associated with an increased risk of vertebrobasilar accidents in the Rothwell study[10] is "more than 2," not "more than 3."

Deficient methods, a biased sample of reference material, selective reporting of results, and prejudicial language lead us to conclude that Dr. Ernst's article is without scientific merit. The fact that his paper went through peer and editorial review and into publication is a more serious matter concerning the Journal's scientific review policies. ■

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